

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

KONAKA et al.

Art Unit: Unassigned

Application No. Unassigned

Examiner: Unassigned

Filed: February 13, 2002

For: USER INTERFACE DESIGNING
APPARATUS

PRELIMINARY AMENDMENT

Commissioner for Patents
Washington, D.C. 20231

Dear Sir:

Prior to the examination of the above-identified patent application, please enter the following amendments and consider the following remarks.

IN THE SPECIFICATION:

Replace the paragraph beginning at page 1, line 4 with:

The present invention relates to a user interface designing apparatus which can be applied to designing of a user interface for, e.g., a portable telephone such as a cellular phone, a cellphone, a mobile phone or the like as well as a portable information terminal so that display parts (e.g. graphic or the like parts to be displayed) can be changed or interchanged in accompanying the state transitions for events.

Replace the paragraph beginning at page 1, line 13 with:

For better understanding of the concept underlying the present invention, description will first be made in brief of a related technique known heretofore. Figure 3 of the accompanying drawings is a block diagram showing a conventional user interface designing apparatus disclosed in, for example, in Japanese Patent Application Laid-Open Publication No. 137599/2000. The user interface designing apparatus disclosed in this publication is comprised of a GUI (Graphical User Interface) image designing device 101 which includes a layout design module 111 for designing, interactively, layout data, an attribute setting module

112 for setting property data and a generation opportunity or timing setting module 113 for setting generation opportunities or timings on a GUI part-by-part basis, a design data storing device 102 which includes storing units such as a layout data storing unit 121, a property data storing unit 122 and a generation timing data storing unit 123, a source program generating module 131 for generating a source program on the basis of design data, and an output unit 104 including a GUI image source program output module 141.

Replace the paragraph beginning at page 2, line 1 with:

In the user interface designing apparatus of the structure described above, a source program for generating GUI parts on a GUI image screen and a source program of an access function is generated when a first generation timing is set or activated, while, when a second generation timing is set or activated, a source program of a dynamic generation access function is generated for generating the GUI part, as occasion requires.

Replace the paragraph beginning at page 2, line 9 with:

With the conventional user interface designing apparatus of the arrangement described above, designing of the user interface parts accompanying the state transitions, as well as simulation of the user interface containing combinations thereof, cannot be implemented.

IN THE CLAIMS:

Replace the indicated claims with:

1. (Amended) A user interface designing apparatus, comprising:
state set editing means for adding/deleting states of a composite display part having a plurality of states;
event handling editing means for describing event handling for a state transition in each of the states of the composite display part;
elementary display part storing means for storing elementary display parts designed previously; and
state display editing means for adding/deleting elementary display parts to be displayed in each of the states of the composite display part.
2. (Amended) The user interface designing apparatus according to claim 1, further comprising composite display part storing means for storing said composite display parts as

designed, wherein said state display editing means is arranged as to add/delete another composite display part designed.

3. (Amended) The user interface designing apparatus according to claim 1, wherein said state set editing means groups several states of the composite display part in a grouped state, and edits, en bloc, the display parts which are commonly displayed in the grouped state.

4. (Amended) The user interface designing apparatus according to claim 1, wherein said state set editing means is arranged to group several states of the composite display part in a grouped state, and
said event handling editing means edits, en bloc, the event handlings which are commonly in the grouped state.

5. (Amended) The user interface designing apparatus according to claim 1, wherein the elementary display part stored in said elementary display part storing means has properties corresponding to size, position, external appearance, and behavior, and further comprising property editing means for editing the properties of the elementary display part added to each state or group of states of the composite display part.

6. (Amended) The user interface designing apparatus according to claim 5, further comprising composite display part property setting means adding/deleting the properties representative of behaviors of the composite display part, wherein said property editing means edits the properties of the composite display part added to each state or group of states of said composite display part.

7. (Amended) The user interface designing apparatus according to claim 5, wherein said property editing means is arranged describes the properties of the elementary display part or, alternatively, the composite display part by referencing values of the properties of another elementary display part or, alternatively, the properties of another composite display part.

8. (Amended) The user interface designing apparatus according to claim 5, wherein said state display editing means displays, graphically, disposition of the elementary display part or, alternatively, the composite display part in each state or group of states of the composite display part while editing, graphically, properties and information concerning layout, such as size or dimension or inter-part relation, through direct manipulation with an input device.

9. (Amended) The user interface designing apparatus according to claim 5, wherein said state display editing means is arranged displays, graphically, disposition of the elementary display part or, alternatively, the composite display part in each state or group of states of the composite display part while editing, graphically, properties and information concerning layout, inclusive of size or inter-part relation through direct manipulation with an input device or, alternatively, by activating directly a corresponding one of said property editing means.

10. (Amended) The user interface designing apparatus according to claim 2, further comprising simulation means for simulating behavior of the composite display part stored in said composite display part storing means in conformance with manipulation input activated through an input device.

11. (Amended) The user interface designing apparatus according to claim 10, further comprising virtual display part storing means for storing virtual display parts having functions realized virtually by said simulation means.

12. (Amended) The user interface designing apparatus according to claim 10, wherein

said event handling editing means sets, virtually, an event difficult to realize, practically, and edits an event handling for the event, and

said simulation means issues the event, virtually, through an input/output device to simulate the processing for the virtual event issued, with a relevant composite display part.

IN THE ABSTRACT:

Replace the Abstract with:

ABSTRACT OF THE DISCLOSURE

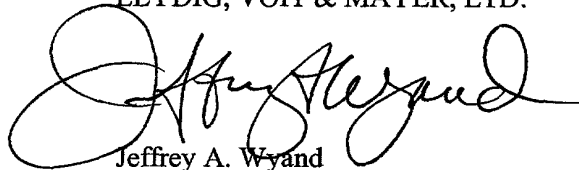
A user interface designing apparatus for easily designing a user interface which can change display parts in accompanying state transitions for events by adding/deleting states and editing the display part and event handling in each state. The apparatus includes a state set editor for adding/deleting states of a composite display part having a multiplicity of states, an event handling editor for describing an event handling for a state transition in each state of the composite display part, an elementary display part memory for storing elementary display parts designed previously, and a state display editor for adding/deleting elementary display parts to be displayed in each state of the composite display part.

REMARKS

The foregoing Amendment corrects translational errors and conforms the claims to United States practice. No new matter is added.

Respectfully submitted,

LEYDIG, VOIT & MAYER, LTD.



Jeffrey A. Wyand
Registration No. 29,458

Suite 300
700 Thirteenth Street, N.W.
Washington, D.C. 20005

Telephone: (202) 737-6770

Facsimile: (202) 737-6776

Date: February 13, 2002

JAW:ves

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AMENDMENTS TO SPECIFICATION, CLAIMS AND
ABSTRACT MADE VIA PRELIMINARY AMENDMENT

Amendments to the paragraph beginning at page 1, line 4:

The present invention relates to a user interface designing apparatus which can be applied to designing of a user interface for, e.g., a portable telephone such as a cellular phone, a cellphone, a mobile phone or the like as well as a portable information terminal so that display parts (e.g. graphic or the like parts to be displayed) can be changed-over or interchanged in accompanying the state transitions for events.

Amendments to the paragraph beginning at page 1, line 13:

For better understanding of the concept underlying the present invention, description will first be made in brief of a related technique known heretofore. Figure 3 of the accompanying drawings is a block diagram showing a conventional user interface designing apparatus disclosed in, for example, in Japanese Patent Application Laid-Open Publication No. 137599/2000. The user interface designing apparatus disclosed in this publication is comprised of a GUI (Graphical User Interface) image designing device 101 which includes a layout design module 111 for designing, interactively, layout data, an attribute setting module 112 for setting property data and a generation opportunity or timing setting module 113 for setting generation opportunities or timings on a GUI part-by-part basis, a design data storing device 102 which includes storing units such as a layout data storing unit 121, ~~an~~ a property data storing unit 122 and a generation timing data storing unit 123, a source program generating module 131 for generating a source program on the basis of design data, and an output unit 104 including a GUI image source program output module 141.

Amendments to the paragraph beginning at page 2, line 1:

In the user interface designing apparatus of the structure described above, a source program for generating GUI parts on a GUI image screen and a source program of an access function is generated when a first generation timing is set or activated, while, when a second generation timing is set or activated, a source program of a dynamic generation access function is generated for ~~thereby allowing generating the GUI part to be generated,~~ as occasion requires.

Amendments to the paragraph beginning at page 2, line 9:

With the conventional user interface designing apparatus of the arrangement described above, designing of the user interface parts ~~in~~ accompanying the state transitions, as well as simulation of the user interface containing ~~combination~~ combinations thereof, ~~can~~ not ~~cannot~~ be implemented.

Amendments to existing claims:

1. (Amended) A user interface designing apparatus, comprising:
state set editing means for adding/deleting states of a composite display part having a plurality of states;
event handling editing means for describing ~~an~~ event handling for a state transition in each of the states of ~~said~~ the composite display part;
elementary display part storing means for storing elementary display parts designed previously; and
state display editing means for adding/deleting elementary display parts to be displayed in each of the states of ~~said~~ the composite display part.

2. (Amended) ~~A~~ The user interface designing apparatus according to claim 1, further comprising: composite display part storing means for storing said composite display parts as designed, wherein said state display editing means is ~~so~~ arranged as to add/delete ~~other~~ designed another composite display part designed.

3. (Amended) ~~A~~ The user interface designing apparatus according to claim 1, wherein said state set editing means is ~~so~~ arranged as to group groups several states of ~~said~~ the composite display part in a grouped state, and ~~wherein said state display editing means is~~

~~so arranged as to edit~~ edits, en bloc, the display parts which are commonly displayed, ~~in common in said the~~ grouped state.

4. (Amended) ~~A~~ The user interface designing apparatus according to claim 1, wherein

said state set editing means is ~~so arranged as to~~ group several states of ~~said the~~ composite display part in a grouped state, and

~~wherein said event handling editing means is so arranged as to edit~~ edits, en bloc, the event handlings which are ~~in common~~ commonly in ~~said the~~ grouped state.

5. (Amended) ~~A~~ The user interface designing apparatus according to claim 1, ~~said wherein the~~ elementary display part stored in said elementary display part storing means having has properties corresponding to size, position, external appearance, and behavior, and further comprising: property editing means for editing ~~said the~~ properties of the elementary display part added to each state or ~~said state~~ group of states of ~~said the~~ composite display part.

6. (Amended) ~~A~~ The user interface designing apparatus according to claim 5, further comprising: composite display part property setting means adding/deleting the properties representative of behaviors of ~~said the~~ composite display part, wherein said property editing means is ~~so arranged as to edit~~ edits the properties of the composite display part added to each state or ~~said state~~ group of states of said composite display part.

7. (Amended) ~~A~~ The user interface designing apparatus according to claim 5, wherein said property editing means is ~~so arranged as to be capable of describing~~ describes the properties of ~~said the~~ elementary display part or, alternatively, ~~said the~~ composite display part by referencing values of the properties of ~~other another~~ elementary display part or, alternatively ~~these, the properties of other another~~ composite display part.

8. (Amended) ~~A~~ The user interface designing apparatus according to claim 5, wherein said state display editing means ~~so is arranged as to display~~ displays, graphically, disposition of ~~said the~~ elementary display part or, alternatively, ~~said the~~ composite display part in each state or ~~state~~ group of states of ~~said the~~ composite display part while editing, graphically, properties and information concerning layout, such as size or dimension or inter-part relation, through direct manipulation with an input device.

9. (Amended) ~~A~~ The user interface designing apparatus according to claim 5, wherein said state display editing means ~~so is arranged as to display~~ displays, graphically,

disposition of ~~said the~~ elementary display part or, alternatively, ~~said the~~ composite display part in each state or ~~state~~ group of states of ~~said the~~ composite display part while editing, graphically, properties and information concerning layout, inclusive of size or inter-part relation through direct manipulation with an input device or, alternatively, by activating directly a corresponding one of said property editing means.

10. (Amended) ~~A~~ The user interface designing apparatus according to claim 2, further comprising simulation means for simulating behavior of ~~said the~~ composite display part stored in said composite display part storing means in conformance with manipulation input activated through an input device.

11. (Amended) ~~A~~ The user interface designing apparatus according to claim 10, further comprising virtual display part storing means for storing virtual display parts having functions ~~easy to realize~~ realized virtually by said simulation means.

12. (Amended) ~~A~~ The user interface designing apparatus according to claim 10, wherein
said event handling editing means ~~is so arranged as to set~~ sets, virtually, an event difficult to realize, practically, and ~~edit~~ edits an event handling for ~~said the~~ event, and
~~wherein said simulation means is so arranged as to make said virtual~~ issues the event
~~be issued, virtually, through the medium of an input/output device to thereby simulate the~~
processing for ~~said issued the~~ virtual event issued, with a relevant composite display part.

Amendments to the abstract:

ABSTRACT OF THE DISCLOSURE

A user interface designing apparatus ~~capable of~~ for easily designing a user interface which can change ~~over~~ display parts in accompanying state transitions for events by adding/deleting states and editing the display part and event handling in each state. The apparatus includes a state set ~~editing means~~ editor for adding/deleting states of a composite display part having a ~~plurality~~ multiplicity of states, an event handling ~~editing means~~ editor for describing an event handling for a state transition in each state of the composite display part, an elementary display part ~~storing means~~ memory for storing elementary display parts designed previously, and a state display ~~editing means~~ editor for adding/deleting elementary display parts to be displayed in each state of the composite display part.

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PENDING CLAIMS AFTER ENTRY OF PRELIMINARY AMENDMENT

1. A user interface designing apparatus, comprising:
state set editing means for adding/deleting states of a composite display part having a plurality of states;
event handling editing means for describing event handling for a state transition in each of the states of the composite display part;
elementary display part storing means for storing elementary display parts designed previously; and
state display editing means for adding/deleting elementary display parts to be displayed in each of the states of the composite display part.
2. The user interface designing apparatus according to claim 1, further comprising composite display part storing means for storing said composite display parts as designed, wherein said state display editing means is arranged as to add/delete another composite display part designed.
3. The user interface designing apparatus according to claim 1, wherein said state set editing means groups several states of the composite display part in a grouped state, and edits, en bloc, the display parts which are commonly displayed in the grouped state.
4. The user interface designing apparatus according to claim 1, wherein
said state set editing means is arranged to group several states of the composite display part in a grouped state, and
said event handling editing means edits, en bloc, the event handlings which are commonly in the grouped state.

5. The user interface designing apparatus according to claim 1, wherein the elementary display part stored in said elementary display part storing means has properties corresponding to size, position, external appearance, and behavior, and further comprising property editing means for editing the properties of the elementary display part added to each state or group of states of the composite display part.

6. The user interface designing apparatus according to claim 5, further comprising composite display part property setting means adding/deleting the properties representative of behaviors of the composite display part, wherein said property editing means edits the properties of the composite display part added to each state or group of states of said composite display part.

7. The user interface designing apparatus according to claim 5, wherein said property editing means is arranged describes the properties of the elementary display part or, alternatively, the composite display part by referencing values of the properties of another elementary display part or, alternatively, the properties of another composite display part.

8. The user interface designing apparatus according to claim 5, wherein said state display editing means displays, graphically, disposition of the elementary display part or, alternatively, the composite display part in each state or group of states of the composite display part while editing, graphically, properties and information concerning layout, such as size or dimension or inter-part relation, through direct manipulation with an input device.

9. The user interface designing apparatus according to claim 5, wherein said state display editing means is arranged displays, graphically, disposition of the elementary display part or, alternatively, the composite display part in each state or group of states of the composite display part while editing, graphically, properties and information concerning layout, inclusive of size or inter-part relation through direct manipulation with an input device or, alternatively, by activating directly a corresponding one of said property editing means.

10. The user interface designing apparatus according to claim 2, further comprising simulation means for simulating behavior of the composite display part stored in said composite display part storing means in conformance with manipulation input activated through an input device.

11. The user interface designing apparatus according to claim 10, further comprising virtual display part storing means for storing virtual display parts having functions realized virtually by said simulation means.

12. The user interface designing apparatus according to claim 10, wherein said event handling editing means sets, virtually, an event difficult to realize, practically, and edits an event handling for the event, and

said simulation means issues the event, virtually, through an input/output device to simulate the processing for the virtual event issued, with a relevant composite display part.